

# PIEZOELECTRIC GENERATOR

## ABSTRACT

A method of extracting electrical energy from mechanical motion includes  
5 reusing an elastic portion of energy in a transducer by transferring the elastic portion of  
energy to another transducer. An apparatus for extracting electrical energy from  
mechanical motion includes at least two transducers coupled such that an elastic portion  
of energy in one transducer is transferable to the other transducer. The transducers are  
coupled by a member defining a waved surface, and each transducer defines a coupler in  
10 contact with the waved surface for movement following the waved surface. Couplers of  
two transducers are positioned such that they move out-of-phase relative to each other.  
The transducers are bound to a plate positioned between members such that the plate is  
deformed. The plate and members are configured such that relative rotation  
therebetween produces a wave that travels along the plate.

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